WHAT IS CLAIMED IS:

1. A method for dynamically determining the power compression point of an amplifier in a distributed network under the control of a computer, the network having a first terminal including the amplifier operatively coupled to a plurality of second terminals by a communication channel, said method comprising steps for:

generating bit error rate (BER) messages indicative of measured BER for a signal transmitted at N power levels, said BER messages including respective tags indicative of the N power levels for that BER, at the second terminals;

reducing the maximum allowed power of the amplifier when it is determined that the amplifier is approaching saturation responsive to the BER messages.

2. The method as recited in claim 1, wherein N is an integer greater than 2, and wherein said reducing step comprises steps for:

determining an average BER responsive to said BER messages;

determining BER slope responsive to said average BER; and

reducing the maximum allowed power when the BER slope is indicative of lower slope at higher power levels.

3. The method as recited in claim 1, wherein the signal is a control burst.

4. The method as recited in claim 3, wherein the control burst is transmitted at the N power levels is N sequential frames, and wherein N is an integer greater than or equal to 2.

5. A method for dynamically determining the power compression point of an amplifier in a distributed network under the control of a computer, the network having a first terminal including the amplifier operatively coupled to a plurality of second terminals by a communication channel, said method comprising steps for:

(1) transmitting a signal at N power levels to the second terminals, where N is a positive integer;

(2) measuring a bit error rate (BER) for each of said N power levels at the second terminals;

(3) generating BER messages including respective tags indicative of said N power levels for that BER;

(4) transmitting the BER messages to the computer; and

(5) when it is determined that the amplifier is approaching saturation from the BER messages, reducing the maximum allowed power of the amplifier.

6. The method as recited in claim 5, wherein the signal is a control burst, and wherein the communications channel comprises a satellite.

7. The method as recited in claim 6, wherein the control burst is transmitted at N power levels is N sequential frames, and wherein N is an integer greater than or equal to 2.

8. The method as recited in claim 5, wherein said step (5) further comprises steps of:

(5)(i) determining an average BER responsive to said BER messages;

(5) (ii) determining BER slope responsive to said average BER; and

(5)(iii) reducing the maximum allowed power when the BER slope is indicative of lower slope at higher power levels

9. The method as recited in claim 5, wherein said step (5) further comprises steps of:

(5)(i) determining an average BER responsive to said BER messages;

(5) (ii) determining BER slope responsive to said average BER; and

(5)(iii) evaluating the BER slope with respect to reference power-BER data stored in the computer; and

(5)(iv) reducing the maximum allowed power when the BER slope and said reference power-BER data diverge to thereby indicate a lower slope at higher power levels.

10. A method for dynamic uplink power control for an amplifier in a distributed network under the control of a computer, the network having a first terminal including the amplifier operatively coupled to a plurality of second terminals by a communication channel, said method comprising steps for:

examining a plurality of control burst bit error rate (CB BER) measurement reports;

computing an average CB BER responsive to said CB BER measurement reports;

when said average BER is greater than said predetermined BER threshold, increasing power level of the amplifier; and

when said average BER is less than said predetermined BER threshold, decreasing power level of the amplifier.

11. The method as recited in claim 10, further comprising steps for:

determining whether the power level of the amplifier is greater than a predetermined maximum power level; and

when the power level is greater than said predetermined maximum power level, varying at least one characteristic of a signal carried by the communications channel so as to reduce the BER.

12. The method as recited in claim 10, further comprising steps for:

determining whether the power level of the amplifier is greater than a predetermined maximum power level; and

when the power level is greater than said predetermined maximum power level, establishing binary phase shift keying (BPSK) as the signal modulation technique; and

when the power level is less than said predetermined maximum power level, establishing quadrature phase shift keying (QPSK) as the signal modulation technique.

13. The method as recited in claim 12, wherein said determining step is performed following said increasing step.

14. A method for dynamic uplink power control for an amplifier in a distributed network under the control of a computer, the network having a first terminal including the amplifier operatively coupled to a plurality of second terminals by a communication channel, said method comprising steps for:

examining a plurality of control burst bit error rate (CB BER) measurement reports;

computing an average CB BER responsive to said CB BER measurement reports;

comparing said average BER with a predetermined BER threshold;

when said average BER is greater than said predetermined BER threshold, increasing power level of the amplifier; and

when said average BER is less than said predetermined BER threshold, decreasing power level of the amplifier.

15. The method as recited in claim 14, further comprising steps for:

determining whether the power level of the amplifier is greater than a predetermined maximum power level; and

when the power level is greater than said predetermined maximum power level, varying at least one characteristic of a signal carried by the communications channel so as to reduce the BER.

16. The method as recited in claim 14, further comprising steps for:

determining whether the power level of the amplifier is greater than a predetermined maximum power level; and

when the power level is greater than said predetermined maximum power level, establishing binary phase shift keying (BPSK) as the signal modulation technique; and

when the power level is less than said predetermined maximum power level, establishing quadrature phase shift keying (QPSK) as the signal modulation technique.

17. The method as recited in claim 16, wherein said determining step is performed following said increasing step.

18. The method as recited in claim 14, further comprising the step of:

determining up and down power values U and D, respectively, based on measured and target BERs; and

wherein:

said increasing step comprises increasing power level of the amplifier by U dB;

said decreasing step comprises decreasing the power level of the amplifier by D dB; and

U and D are real numbers stored in a database of the computer.